

REPORT ON OIL ENGINE MACHINERY.

Received at London Office

No. NWE 441

18 AUG 2

Report 19 When handed in at Local Office 19 Port of Hamburg.
 Date, First Survey 31 - 1 - 46 Last Survey 18/7 19 47
 Number of Visits 34.

Single Triple Screw vessel "EMPIRE MOWDDACH" (ex Pontos) Tons Gross 3703
 Net -
 Bremen-Vegesack By whom built Bremer Vulkan Yard No. 716 When built -
 Bremen-Vegesack By whom made Bremer Vulkan Engine No. - When made -
 made at - By whom made - Boiler No. - When made -
 3.050 Owners Elders and Fyffes, Ltd. Port belonging to London
 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Carriage of Refrigerated Cargoes.

ES, &c. — Type of Engines M.A.N. D5Zu 60/90 airless injection 2 or 4 stroke cycle 2 Single or double acting double
 Pressure in cylinders 48.5 kg/cm² Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 5 No. of cranks 5
 Pressure lower 4.5 kg/cm² + 1 scavenge air pump
 Is there a bearing between each crank Yes
 130 minute Flywheel dia. 290 mm Weight - Means of ignition solid inject Kind of fuel used Diesel oil
 forged dia. of journals 420 mm Crank pin dia. 418 mm Crank webs Mid. length breadth 560 mm Thickness parallel to axis solid
 built as fitted 4175 hole with 175 hole Mid. length thickness 235 mm Thickness around eyehole crank shaft
 as per Rule - Intermediate Shafts, diameter as fitted - Thrust Shaft, diameter at collars 800 x 150 mm
 as fitted 390 mm Is the tube shaft fitted with a continuous liner Yes
 as fitted 390 mm Screw Shaft, diameter as fitted 338 mm Is the tube shaft fitted with a continuous liner Yes
 as fitted 390 mm Inner 383 mm Thickness between bushes 376 mm Is the after end of the liner made watertight in the Yes
 as fitted 390 mm outer 381 mm If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -

Does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-
 If two liners are fitted, is the shaft lapped or protected between the liners - Is an approved Oil Gland or other appliance fitted at the after -
 ft No If so, state type - Length of bearing in Stern Bush next to and supporting propeller 1900 mm
 1.165 3/8 Pitch 139 25/32 No. of blades 4 Material Bronze whether moveable No Total developed surface 62.95 sq. feet

versing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of -
 forced Thickness of cylinder liners 40 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled -
 non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned -
 fine - Cooling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 corked from the Main Engines, No. - Diameter - Stroke - Can one be overhauled while the other is at work -
 ted to the Main Bilge Line { No. and size Two - Bilge and Ballast; Bilge 264 galls/min, Ballast 440 galls/min
 How driven electrically

water led to the bilges Overboard If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping -
 s, No. and size One, 440 galls/min Power Driven Lubricating Oil Pumps, including spare pump, No. and size one M.E. drive, 30 tons/hr, one stand by - 132 galls/min
 dependent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary -
 No. and size 4 of 80 m/m bore In machinery spaces 4 of 80 m/m bore In tunnel well one of 80 m/m bore
 6 of 90 m/m bore, - cofferdams - aft p. & s of 60 m/m, midships one of 60 m/m, forward one of 60 m/m

Power Pump Direct Suctions to the engine room bilges, No. and size One - 100 mm bore 7 10th @ 100 2 (1 Bilge pump 1 Ballast)
 ge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily Yes
 boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 on steel no boxes Are they fitted with valves or cocks valves Are they fixed -

h on the ship's side to be seen without lifting the platform plates Yes Are the overboard discharges above or below the deep water line Above
 fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate -
 ss through the bunkers Combined O.F. filling and ballast How are they protected Not protected - steel & Cast iron
 ss through the deep tanks - Have they been tested as per Rule Yes
 cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

ment of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery -
 a one compartment to another screw left- valves on the shaft tunnel watertight Yes Is it fitted with a watertight door Yes worked from main deck level
 el, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -
 mpressors, No. - No. of stages - diameters - stroke - driven by -
 Compressors, No. 2 No. of stages 2 diameters M.P. 95 mm L.P. 245 mm stroke 220 m/m driven by Diesel motor thro' clutch

ry Air Compressors, No. One No. of stages One diameters 45 mm stroke 70 mm driven by Hand
 n is made for first charging the air receivers Hand compressor
 ir Pumps, No. One diameter 2 - 54 11/32" stroke 28 11/32" driven by Main Engine
 gines crank shafts, diameter as per Rule 135 mm journal, 125 mm pin No. Three - 6 cylinder Position Port side - Engine room, bottom platform
 liary engines been constructed under special survey - Is a report sent herewith -

10/9/47

003257-003368-0047

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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....
Is each receiver, which can be isolated, fitted with a safety valve as per Rule..... Yes ✓
Can the internal surfaces of the receivers be examined and cleaned..... Yes ✓ Is a drain fitted at the lowest part of each receiver.....
Injection Air Receivers, No...... Cubic capacity of each..... Internal diameter..... thickness.....
Seamless, lap welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....
Starting Air Receivers, No...... 2 ✓ Total cubic capacity..... 445 cuft Internal diameter..... thickness.....
Seamless, lap welded or riveted longitudinal joint..... riveted Material..... Steel Range of tensile strength..... Working pressure.....

IS A DONKEY BOILER FITTED..... If so, is a report now forwarded.....
Is the donkey boiler intended to be used for domestic purposes only.....
PLANS. Are approved plans forwarded herewith for shafting..... Receivers..... Separate.....
(If not, state date of approval).....
Donkey boilers..... General pumping arrangements..... as fitted, yes Pumping arrangements in machinery space..... as fitted
Oil fuel burning arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... Yes ✓
State the principal additional spare gear supplied..... 3 top and one bottom cylinder covers.

~~The foregoing is a correct description,~~

~~Manufacturer.~~

Dates of Survey while building { During progress of work in shops - - }
During erection on board vessel - - }
Total No. of visits.....

Dates of examination of principal parts—Cylinders..... Covers..... Pistons..... Rods..... Connecting.....
Crank shaft..... Flywheel shaft..... Thrust shaft..... Intermediate shafts..... Tube shaft.....
Screw shaft..... Propeller..... Stern tube..... Engine scatings..... Engine holding down bolts.....
Completion of fitting sea connections..... Completion of pumping arrangements..... Engines tried under working condition.....
Crank shaft, material..... Identification mark..... Flywheel shaft, material..... Identification mark.....
Thrust shaft, material..... Identification mark..... Intermediate shafts, material..... Identification mark.....
Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....
Identification marks on air receivers.....

Is the flash point of the oil to be used over 150°F..... Yes ✓
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with..... Yes ✓
Description of fire extinguishing apparatus fitted..... In E.R. 4 patent foam type, one chemical type for switchboard and C.O.2 and e.....
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo..... No. ✓ If so, have the requirements of the Rules been complied with.....
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with.....
Is this machinery duplicate of a previous case..... Yes ✓ If so, state name of vessel..... "Empire Alde" (ex Pelikan)

General Remarks (State quality of workmanship, opinions as to class, &c.....)

This vessel's main and auxiliary machinery has been examined in detail throughout, including all modifications to the pumping and ballast arrangements as indicated on Deutsche Werft Plan submitted for approval.
All parts were found to be or have now been placed in an efficient condition and have been examined under working conditions with satisfactory results.

It is submitted that this vessel's machinery is eligible to receive the Society's class in the Register's record of LMC 7,47.

The amount of Entry Fee LMC ... £ 172 : 10 :
Special £ : :
Donkey Boiler Fee... .. £ : :
Travelling Expenses (if any) £ : :

When applied for..... 19.....
When received..... 19.....

Committee's Minute

Assigned LMC 7,47 Oil Eng.
S (C.L) 3,47

OCT 3 1947



Engineer Surveyor to Lloyd's Register

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